AMERICAN
# GAS JOURNAL
Established 1859 Pioneer of the Gas Industry

VOL. 123. No. 12
WHOLE NO. 3438

NEW YORK, SATURDAY, SEPTEMBER 19, 1925

Subscription, $3 Per Year
$4 Canada $5 Foreign


# SHUR-STOP COCKS

## with the Fully Protected Stop INSURES SAFETY!

Every hazard to perfect and absolute control of the gas flow in ranges has been removed in the *Shur-Stop* Cock.

The stop element and the washer in the *Shur-Stop* Cock are one piece, fully enclosed and protected by the barrel. No exposed stop pin to work loose and drop out, become bent or shear off.

No slot to fill with dirt and prevent full opening or closing, or wear away at edges and allow handle to pass beyond safety point.

Shur-Stop

*"With the Fully Protected Stop"*

Due to the [illegible] and exposed stop-pin, the top of barrel on a *Shur-Stop* Cock is perfectly smooth, which prevents dirt and grit—by its grinding action — to widen space between stem and barrel, causing leakage.

When *Shur-Stop* Cocks are installed on a range the maximum of safety is assured, and all complaints relative to gas control are obviated.

Your profit depends on customer satisfaction. **Insist on Shur-Stop Cocks on all ranges.**

*Write Today for Sample*

## THE STANDARD PENINSULAR BRASS WORKS

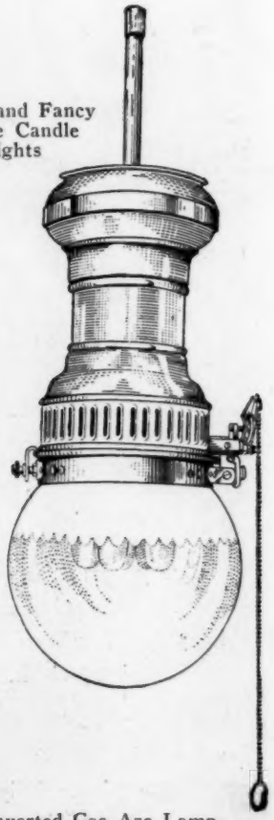
**WEST WARREN AND WALTON AVENUES** **DETROIT, MICH.**

AJAX BRASS & IRON CO., 59 PEARL STREET, NEW YORK, EASTERN DISTRIBUTORS


Index to Contents, Page 4 Advertising Index, Page 31

Standard Mantle Lamps

Plain and Fancy Single Candle Lights



Inverted Gas Arc Lamp, Made for Both Indoor and Outdoor Use

# GLEASON PRODUCTS

Acetylene Appliances, Burners, Brackets, Acetylene Burners, Candle Burners, Cluster Burners, Heating Burners, Illuminating Burners, Chandeliers, Burner Cleaners, Gas Fittings, Dome Fixtures, Gas Gauges, Pressure Gauges, Globes, Safety Globes, Gas Heaters, Globe Holders, Lamp Holders, Taper and Key Holders, Ceiling Hooks, Lamps, Boulevard Lamps, Hinge Lamps, Hurricane Lamps, Lawn Lamps, Porch Lamps, Post Lamps, Safety Lamps, Stable Lamps, Cigar Lighters, Burner Pliers, Gas Pliers, Lamp Posts, Shades, Smoke Shades, Tin Shades, Tips, Gas Tubing.

*The result of over half century of study of gas lighting requirements*

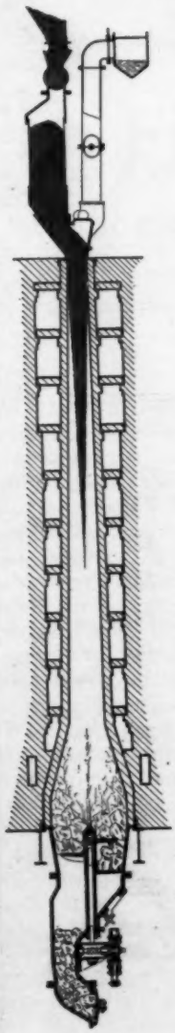
The Matchless Self-Lighting Gas Burner

Wire Globes Over or Under Burner

## E. P. GLEASON MANUFACTURING CO.

37 AND 39 MURRAY STREET
NEW YORK CITY

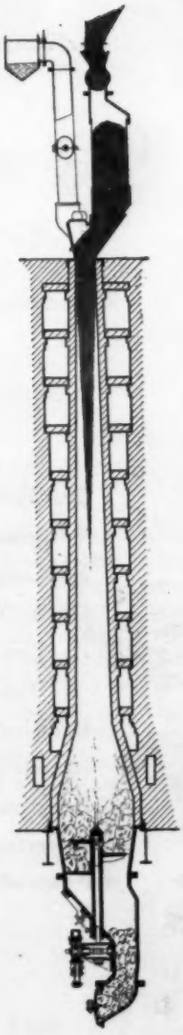
# GLOVER-WEST
# *Vertical Retorts*



## American Installations

**Fitchburg, Mass.**
**Springfield, Mass.**
**Pawtucket, R. I.**
**Portland, Me.**
**Ottawa, Ont.**
**Montreal, Que.**
**Fitchburg, Mass.** (Repeat)
**Pernambuco, Brazil**
**Santos, Brazil**
**Montreal, Que.** (Repeat)
**Vancouver, B. C.**
**Victoria, B. C.**
**Montreal, Que.** (2nd Repeat)
**Watertown, N. Y.**
**Malden, Mass.**
**Vancouver, B. C.** (Repeat)
**Toronto, Ont.**
**Portland, Me.** (Repeat)
**Buenos Aires**
**Santiago, Chile**
**Fargo, N. Dakota**

***Combined Daily Capacity***
***36,000,000 Cu. Ft.***



## WEST GAS IMPROVEMENT CO.
## *of America, Inc.*
## 441 Lexington Ave. New York.

# American Gas Journal

*SIXTY-SIXTH YEAR*

*Published Weekly by American Gas Light Journal, Inc., 53 Park Place, New York, N. Y.*

S. G. KRAKE, Pres. & Treas. C. S. MYERS, Vice-Pres. A. M. GLEASON, Sec'y.

STANTON G. KRAKE, Managing Editor ISMAR GINSBERG, Editor

*"MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS"*

## *Contents of This Issue*

**The Fires That Never Go Out—By E. R. Hamilton..... 237**
**Technical Problem in a Gas Works—By Dr. Gustaff Offs..... 239**
**Increasing Sales of Gas in the South—By E. D. Brewer..... 241**
**Office Organization and Customer Relations—By G. L. Harris.. 243**
**As The Journal Views It ..... 245**
**Timely Advertising**
**Utilities Must Tell Their Story—By Norwood W. Brocket.... 246**
**Industrial Gas Lesson No. 88..... 247**
**Progress in Gas Technology..... 249**
**Advertising Here and There—By William H. Matlack..... 250**
**News of the Gas Industry..... 255**

Subscription $3.00 per year, including postage, in the United States, Mexico, Cuba, Porto Rico, Hawaii or the Philippines; in Canada, $4.00; foreign, $5.00—Single Copies, 10 cents.

AMERICAN GAS JOURNAL, Sept. 19, 1925. Vol. 123. No. 12. Published weekly by American Gas Light Journal, Inc., New York, N. Y. Entered as second-class matter Jan. 9, 1917, at the post-office at New York, N. Y., under the Act of March 3, 1879.

AMERICAN
GAS JOURNAL

Vol. 123. No. 12 NEW YORK, SEPTEMBER 19, 1925 Whole No. 3538

# "The Fires That Never Go Out"

## Some problems of the gas industry today

*E. R. Hamilton*

Retiring President Canadian Gas Association

EACH year sees a constantly widening horizon of possibilities for the gas industry. Thanks to the co-operation of the press, to those special journals devoted to the gas business, and to the combined efforts of our different companies and associations headed by that splendid organization, the American Gas Association, we are breaking down that apathy, born of long association, with which the public regarded our industry. It is now recognized as one of the leading public utilities, a worthy competitor of electricity. Invested in this industry in North America are over four billion dollars and in a single year more than four hundred and fifty million dollars have been spent in construction and extension work. The development of the gas industry has been accelerating so rapidly that from the past year's growth it is hard to prophesy what the next year may bring.

Of some things we can feel certain. Radical changes have already taken place in the design of water gas apparatus. The use of bituminous coal, the back-run process, the waste heat boiler and steam accumulator, and the substitution of atomized water for steam are all noteworthy advances. In the coal gas production there is a feeling that at almost any moment some new process of complete or low-temperature carbonization will cross the experimental stage and revolutionize this branch of the industry.

### Distribution

Our distribution systems have had to expand so rapidly that power tools are taking the place more and more of slow hand methods. Trenching machines, cranes and back fillers, together with pneumatic drills, spades and tampers allow one man to do the work a dozen formerly found it hard to accomplish. Combined with these the welding of steel and cast iron pipe points to the time when, in the more thickly populated areas, it may be possible to unite smaller plants and generate gas from one super-station as the electric companies are attempting to generate power now.

Economies in our accounting departments are constantly being striven for. Among the larger companies machine bookkeeping is being looked upon with favor. Recently some efforts have been made toward bi-monthly billing of residence customers and under favorable conditions this may even be extended to quarterly billing. The saving to be made by this well warrants its consideration.

Our appliance manufacturers have not been backward in their efforts and we may be proud today of ranges as carefully designed and as beautifully finished as any supplied to the electric trade. The automatic temperature control is now conceded to be as necessary an adjunct of the gas range as the push button lighter which appeared a few years ago. Beautiful space heaters have been designed but more important still is the development of efficient gas fired house heating systems that are competing successfully with coal fired installations.

### Industrial Field

The industrial field for gas heating is expanding so rapidly that it may be safe to say that wherever heat is being used there you have a prospective gas consumer. Burners of different types have been devised to meet the varying requirements of industrial work, from the small blow-pipe of the dentist to the giant burners in the sheet metal plants. Accurate temperature control combined with extreme flexibility is making the gas the one fuel for many industries.

The development of the entire company from yard hand to manager into a sales organization has probably called forth more attention than any other phase of the business during the past few years. It has

*Delivered at annual convention of the Canadian Gas Association.

been recognized that if the gas companies are to be accepted as real factors in the communities which they serve they must contribute more than cold, indifferent service. Every employee must feel that he is a representative of the company and a salesman for the company in the largest sense of the word. The growth of a community and its public utilities are so related that they must progress together. The first step in the appreciation of this must be made among our employees. With this accomplished and their enthusiastic co-operation obtained the whole community will come to a realization of the value of their utilities and the local sale of company securities and customer ownership is the natural and desirable result.

### Importance of Co-operation

That the value of this co-operative spirit has been recognized by the leading companies is evidenced by the amount of educational work of different kinds which is being done. One of the best examples of this is the establishment of home service departments. Another interesting illustration of this effort to bring about closer co-operation between the company and its customers is the appointing of district representatives who are to live in the section of the city to which they are assigned and to do all the work there previously handled by meter readers, complaint men and solicitors. They will actually live with the people whom they serve and, becoming favorably known, will establish a feeling of confidence in their company that could not easily be obtained otherwise.

### Training of Employees

With the rapid expansion of the gas business one of the big problems which confronts us is the training of young men who must become specialists in the different branches of the industry. It is encouraging to know that such colleges as Columbia, John Hopkins and Massachusetts Institute of Technology are establishing gas engineering courses which are being fostered by the American Gas Association, but there will be a constantly increasing number of young men who must enter the gas business in minor positions and whose education in our work is largely in the hands of the company by whom they are employed.

These men come to us as raw recruits, unhampered by traditions, with minds fresh and imaginations capable of being easily stimulated. Each has potential possibilities which will qualify him to work most advantageously in some one of our different departments. Having decided where, it then becomes our problem to train him. Instruction in routine work is easily accomplished, and if we were content to make a simple human machine of him this would be all that would be needed. But if we look for the development of our industry to meet the demands being made upon it we must do more than make a machine of our employee. His imagination must be stimulated. He must visualize the possibilities of the industry and be inspired to strive to attain them. It is this imaginative period of a young man's life which our industry must capitalize, for at that time the enthusiasm of youth is being tempered by judgment and experience and his productive imagination is at its height.

### Use of Trade Journals

To develop and extend this period calls for careful attention on the part of the employer. Trade journals and reference books must be made easily available for him and he encouraged to use them. He should be induced to join organizations where he will meet men in similar work and keep in touch with the progress being made in the industry. Problems should be given him that will tax his ingenuity and necessitate careful study; and the means should be provided for him to work out these problems. Recognition should be made of any valuable idea which he may contribute to the company and encouragement offered for any good effort whether the final result be positive or negative. We must appreciate that just as far as we raise the average ability of our men, do we advance our industry.

### Calling for Ideas and Suggestions

If we place a premium on ideas and make it possible for our employees to present them without embarrassment we are going to arouse latent ability in many of our men which we have never suspected. This has been successfully demonstrated by an impartial system of awards and credits devised by the People's Gas Company of Chicago.

While some of our companies have detailed a man to watch the current scientific literature for new ideas applicable to their business, it is far better to have every man in your organization alert to take advantage of any suggestion that will advance your business and the industry as a whole.

This is a time when our industry is recovering itself, as the giant Atlas did of old, and everyone connected with it must be alive to the tremendous possibilities which are appearing on the horizon. Our younger men must be prepared to meet them and we owe it to the industry as a whole to develop and use all the latent ability these men may have.

---

## PARIS FRIES FISH IN STREETS BY GAS

The manufactured gas company which supplies the city of Paris has recently begun the sale of fried fish and fried potatoes as a practical demonstration of the value of gas for cooking.

Each day at noon a bright-painted motor truck equipped with a gas stove and a white-uniformed chef drives up to each of the company's numerous gas plants, which are scattered through the metropolis.

The gas stove is connected to a main at the gates, and upon it the chef prepares the little fried fish and the crisp potatoes dear to the Parisian.

Crowds of working girls and men besiege the new fish-shops daily, according to reports, and the popularity of the gas-cooked luncheon has been so great that many of the Parisian fish-and-potato venders have already discarded their coal stoves and installed gas-fired equipment, while the demand for domestic gas stoves is increasing steadily.

# Technical Problems in a Gas Works

## Organic sulphur removal, destruction of piping, leaks in retort furnaces

*Dr. Gustave Offs*

*(This very interesting article, which is translated from Das Gas und Wasserfach, is concerned with a number of investigations and experiments that were recently made in the gas works in Cologne, Germany, in the attempt to solve a number of technical difficulties which are of the kind that arise in every gas works no matter where it might be situated. Thus the first of these problems was concerned with the question as to whether or not the ingredients of gas mix on long standing. The second had to do with the causes of decomposition of iron and lead pipe around the plant. The third was concerned with the development of the best method for preventing leaks in the flues of a gas retort installation. The fourth dealt with the removal of the organic sulphur from coal gas. The following article discusses these problems, their causes and offers certain solutions which have been found to be successful.—Trans.)*

---

### Mixing of Gas in Holders

THE first problem that is to be considered is the question: Does gas become thoroughly mixed on long standing in holders? The gas in one of the gas holders in the Cologne works, containing 59,000 cubic meters of gas (about 2,000,000 cubic feet), was allowed to remain untouched for a period of five days. The gas, which was specially prepared for this test, was analyzed every two hours and in addition thereto the carbon dioxide content of the gas was determined every fifteen minutes, and the specific weight and the heating value were established every hour. In all fifteen determinations were made and the average results were as follows: carbon dioxide, 3.16 per cent, specific gravity 0.5099, heating value 4769 calories.

The composition of the gas at various positions of the holder was as follows:

| Position of 59,000 Cubic Meter Holder | Delivery of Gas in Cubic Meters | $CO_2$ | CnHm | $O_2$ | CO | $CH_4$ | $H_2$ | $N_2$ |
|---|---|---|---|---|---|---|---|---|
| 48,200 | 10,800 | 3.0 | 2.6 | 1.6 | 9.6 | 23.1 | 46.7 | 13.4 |
| 32,200 | 26,800 | 3.0 | 2.6 | 1.6 | 9.5 | 22.5 | 48.3 | 12.5 |
| 28,300 | 30,700 | 2.9 | 2.8 | 1.5 | 9.9 | 23.2 | 48.0 | 10.7 |
| 20,000 | 39,000 | 2.9 | 2.7 | 1.5 | 9.9 | 23.0 | 48.0 | 10.7 |
| 16,500 | 42,500 | 2.9 | 2.5 | 1.5 | 9.9 | 23.0 | 49.2 | 11.0 |

It is evident that the composition of the gas is very regular. The difference between the carbon dioxide content figures in the above tabulation and those determined with the aid of th Orsat apparatus is due to the fact that readings could be made on the latter apparatus only within 0.2 per cent error. The results indicate very clearly that the ingredients of gas are thoroughly mixed together in the holder and the gaseous molecules are in a state of constant motion and diffusion.

### Destruction of Iron and Lead Pipe

The distribution department in the gas works at Cologne complained very much about the destruction of pipe, both lead and iron. It has generally been assumed that the cause of the destruction was to be found in the earth which covered the pipes. There was nothing very definite to show that slaked lime and organic compounds in the earth were responsible for the destruction of the pipe.

A certain lead pipe was found to be covered with a thick white incrustation. A sample of the pipe was taken and boiled in water. Then the aqueous solution was filtered, allowed to settle and the matter dissolved in it was permitted to crystallize out. The salt that was obtained in this manner was identified to be the chloride of lead. On further investigation it was found that the pipe had been buried about three feet under the edge of the road near the gutter. This gutter was strewn with salt in the winter time. The rain had dissolved the salt and washed it into the earth. But inasmuch as chloride of sodium will not react with lead, an electric current must have changed the salt into sodium and chlorine and the latter then attacked and ate away the lead pipe.

### Cast Iron Piping

In another case a stretch of cast iron piping was thoroughly eaten away. A sample of this piping showed that the asphalt and jute covering was destroyed in certain places and the piping underneath

was found to be thoroughly rusted away. A test determined that the iron had been changed into the form of ferrous chloride. This is a curious fact, for generally the ferris form of iron is expected when chlorine is permitted to act on it. That the ferrous condition should be formed indicated that nascent hydrogen must have been present. Inasmuch as ferrous chloride is easily converted into the ferric chloride on boiling, the analysis was conducted in a vacuum, in which case the ferrous iron was made to combine with oxalic acid.

Further investigation revealed the fact that the pipes were laid in the vicinity of car tracks and it is evident that stray currents reached the pipes. It is recommended that most careful attention be given to the character of the locality in which pipes are to be laid for the transmission of gas.

### Preventing Leaks Through Flues of Retort Furnaces

Almost all retort furnaces used in the manufacture of gas are more or less leaky in the recuperator section, which condition is brought about by the expansion of the material on heating and the temperature difference that exists between the hot flue gases and the cold air with which it comes in contact. Each time the furnace is heated up and then allowed to cool again strains are induced in the flues and cracks appear in the firebrick work. The mortar falls from the joints between the various parts of the recuperator and holes are formed through which air filters into the furnace and is mixed with the flue gases and then escapes with the same into the air through the chimney.

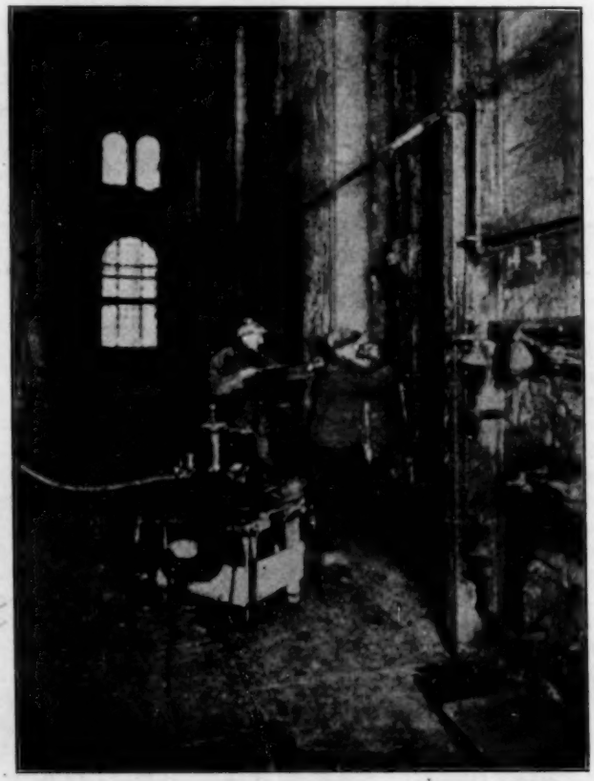
The disadvantages of such a state of affairs may be described under six different headings, but the principal disadvantages are that the retorts are not heated up in the proper fashion and, furthermore, that more coal is burnt than is necessary. Then again secondary combustion processes take place in the flue gas passages which also connote a waste of fuel.

### Finding and Counteracting Leaks

There are four different ways in which such leaks may be discovered and closed up. In the first place there is the Orsat apparatus, which can be used to determine sudden increases in the percentage of ogygen in the flue gases and sudden decreases in the carbon dioxide content. This would indicate that there was a leak somewhere, but it would not tell exactly where the leak was located.

The second method consists in building into the pasages through which the gases travel observation windows. These openings enable the determination of the location of leaks with a greater degree of accuracy than in the first method, but still with not sufficient exactness to make this method of any real practical use. The author used this method and employed for this purpose a pipe of two inches diameter and about fifty centimeters long. In order that no external air penetrate into the gas passages the open end of the pipe is closed with the aid of a glass plate, which is placed in a circular cap. The latter is screwed tight into the cap itself. The cap then fits over the end of the pipe and can be screwed down tightly, the whole forming an observation window, more than a peep hole. In many instances the leaky places were spotted right away as they appeared as dark points in the gas passages. Leaks are likewise present when the passages carry away unburnt gas and under these conditions blue flames of carbon monoxide burning are seen in them.

This method is not a bad one and is chosen as second best after the one that was finally selected as being the best. However, to build the pipes into the walls of the flues and to observe the color spots on the firebrick lining take considerable time and necessitate the exercise of great care. And then again in spite of all his trouble the observer will not find all the leaky spots. A certain number of joints will be discovered to be leaky and they will be repaired, but after the bench of retorts is operating again for some time other leaks will be found and the entire process will have to be repeated.



*Finding Leaks in a Setting*

### The Third Method

The third method consists in illuminating the joints in the air pasasges with the aid of a gas flame, while simultaneous observation is being made in the flue gas ducts. If the flame is seen to be sucked in to-

(Continued on page 251)

# Increasing Sales of Gas in the South *

## Description of various sales plans

*E. D. Brewer*

Atlanta, Ga.

"TODAY," says the New York Times, "the South is not only solvent but rich. What magic has made the South a land of plenty, an industrial giant, agriculturally independent, educationally self-sufficient?

"Per capita, the South now has more churches than any other section.

"Every second city has a college or university.

"The South today is spending almost twice as much on its public schools as the whole United States spent in 1900. In 1923, the value of farm products in the South was $6,127,400,000—trebled since 1909.

"When the last census was taken, the South had 65,500 manufacturing establishments, with a capitalization of $6,883,000,000, less than one-seventh of which was in cotton factories.

"Stock farming is assuming gigantic proportions. There are fifteen agricultural colleges in the South. In the ten years before December 31, 1923, the rate of increase in electric power was 212.7 per cent as compared with 147.9 per cent for the rest of the country."

In 1924, 405,344,000,000 cubic feet of manufactured gas were sold in the United States, and in 1914, 198,838,834,000 cubic feet. This represents a gain of 206,505,166,000 cubic feet, or 104 per centum.

In 1923, 33,760,623,000 cubic feet of manufactured gas were sold in the South, and in 1913, 15,601,881,000 cubic feet. This is a gain of 18,158,742,116,000 cubic feet, or 116 per centum.

### Gas Sales in South

Below is a table showing the detail of the cubic feet of manufactured gas sold in the South in 1923 and in 1913, state by state.

| | *1923 | 1913 | Gain | Per Centum |
|---|---|---|---|---|
| Maryland | 10,446,779,000 | 3,828,489,000 | 6,618,290,000 | 173 |
| District of Columbia | 5,019,120,000 | 2,764,789,000 | 2,254,331,000 | 85 |
| Virginia | 3,066,599,000 | 1,577,894,000 | 1,488,705,000 | 95 |
| North Carolina | 1,165,906,000 | 428,900,000 | 737,006,000 | 172 |
| South Carolina | 747,127,000 | 403,621,000 | 343,506,000 | 85 |
| Georgia | 2,375,782,000 | 1,477,314,000 | 928,468,000 | 65 |
| Florida | 1,248,168,000 | 618,140,000 | 630,028,000 | 102 |
| Alabama | 1,818,849,000 | 812,372,000 | 1,006,477,000 | 124 |
| Mississippi | 277,488,000 | 196,328,000 | 81,160,000 | 42 |
| Tennessee | 2,065,538,000 | 1,072,770,000 | 992,768,000 | 93 |
| Louisiana | 2,320,920,000 | 1,111,573,000 | 1,209,347,000 | 109 |
| Texas | 3,208,357,000 | 1,339,691,000 | 1,868,656,000 | 140 |
| | 33,760,623,000 | 15,601,881,000 | 18,158,742,000 | 116 |

*Written for the 17th Annual Meeting, Southern Gas Association.

* Figures furnished by American Gas Association.

### Stakes for Coming Years

The question before us now is where to set the stakes for this year, and the coming years, and what rate of gain will we be able to show in 1933?

May we suggest that the gas companies get out of the habit of figuring small steady gain in gas sales, and sharpen their pencils to make gas the universal fuel?

Once decided on a course to greatly increase the sale of gas, to go out and get the business, year in and year out, let us hope the gas companies will persevere.

"Perseverance," said an old Negro preacher, "means fust to tak hol', second ter hol' on, and third an' las' to nebber let go."

You are manufacturers of gas and, as we see it, the only reason you have for selling appliances is to sell your product in increasing volume and in a manner that is highly satisfactory to those who buy.

The manufacturers of gas appliances of well-established reputation stand on the assumption that the manufacturers of gas want the best devices that can be constructed in order that gas customers may have at the burner the best possible gas service at the most reasonable cost to the gas buyer.

Can you gentlemen show a satisfactory merchandising profit in gas appliances, and at the same time a great increase in the sale of gas?

In going out after the business of gas sales, will you rate your sales manager on the basis of appliances merchandised at a profit, or on the basis of millions of cubic feet of gas satisfactorily sold?

Are you willing to change your policies in order to get a greater volume of gas business?

Letters sent to 71 manufacturers of gas appliances asking for thoughts on building business elicited eight replies.

### Gas Sales Stimulation

If the idea is a systematic planning of seasonable campaigns, I would recommend that the plans as laid out by the Gas Sales Stimulation Committee of the Commercial Section of the American Gas Association be used as a basis in preparing such a paper.

It is the writer's opinion that this committee has covered every phase of the situation, and if it is possible for you to recommend to the members of the Southern Gas Association subscribing to this service, it will greatly simplify matters.

### Trained Merchandising

Real progress will be made, in our opinion, when the head of the gas company is a man trained in merchandising or selling. If he is not that, then the man next to him ought to be that, and all that is done around a gas office ought to begin and end with the man doing the selling—selling policy, selling rates, selling gas, etc., there isn't much around a gas office except selling, and this can be said of any business that is originated for the purpose of making money.

Once this point of view comes to the top, your hope, mine and thousands of others will have been realized and the industry will go along like all others.

Building business is a selling term, so we will confine the remainder of our remarks to what we think is a necessary set-up for a gas company who wants to fulfill its mission.

To our mind, there are only two big points in the whole proposition:

1st: A gas company should have a management that regards its mission as a selling function.

2nd: Equipped with salesmen who are properly compensated to keep them on the job. Their future incentive for constant effort would be a better selling job in a bigger city, or sales manager, or some other such office in the company they are growing with.

Take a leaf or two out of a manufacturer's experience, or any other business—what does it have to do and what does it do? Given a product for which there is a reasonable market, the biggest single thing it needs to create is a stable selling force, and it has to be so organized that it will keep going when times are good or when times are bad. If anything is trimmed when times are bad, it must be all those things other than the sales force.

### Go After Business

To our way of thinking, the way to build business is to go after it. Going after it means not in in a haphazard way, but the following of a definite plan. We feel that a gas company should be extremely careful about the quality of the appliances it sells. A firm might get by with selling an inefficient gas range or water heater for one season, but they would eventually lose the good-will of their customers through the poor service and high gas bills which the inefficient appliance would cause. The gas company should sell the best there is in gas appliances, and should have a definite plan of merchandising throughout the year.

The appliances should be neatly and attractively displayed in a well-lighted display room. There should be a spacious window for the display of appliances in catchy and seasonal trim.

The newspapers should be used constantly to bring prospects to the display floor. We feel that continuous advertising is the only means by which the maximum of appliance sales can be made. This continuous weekly newspaper advertising should be pyramided four times a year into special drives.

### Co-operation of Manufacturer and Gas Company

It has been our experience that the best method for a manufacturer to follow in assisting gas companies to build business on their particular line, is to co-operate with the gas company in the promotion of special sales and special campaigns in the particular appliance in which they are interested.

We have outlined a series of newspaper ads to be used in connection with special campaigns in which we recommend the use of demonstrating our appliances in a peculiar way. That not only creates interest but leaves a lasting impression in the minds of the housewife who is particularly interested in our goods.

We train our salesmen to carry out our plan and have met with unusual success in this way during the past few years.

### National Advertising

1st: We believe in an extensive and as thorough as possible, National Advertising Campaign in the better Magazine Trade Papers. This is then backed up by dealer co-operation and tie-up which is made possible through the use of prepared matrices and electros, which are furnished for the dealers' use, free of charge.

2nd: We believe in the liberal use of Advertising Aids, such as envelope stuffers, movie slides, menus, banners, and other forms of literature.

3rd: We encourage our dealers to use our window displays which are a rather expensive article of advertising matter, together with a range, either in actual operation, or displaying foods which have been cooked on the ranges.

4th: With the aid of our district representatives, and the use of special demonstrators we find that we get some of our best results through actual demonstrations, which are extensively advertised before being put on, and which never fail to draw large attendance and subsequently end in actual sales.

### A 30-Day Plan for Selling Gas Water Heaters

It was insisted that the gas company make a complete canvass of their consumers for information as

(Continued on page 253)

# Office Organization and Customer Relations*

## Execution of orders, handling of complaints and accurate records

*G. L. Harris*

**Chicago, Ill.**

I HAVE become more and more convinced, in the course of my association with the men and women engaged in the gas industry, that if the customers who use your product could understand the scientific way in which the industry has progressed, they would have the utmost confidence in you and your service.

Confidence is based upon respect.

And no one, knowing the thought and care that is expended in the making of gas, in the absolutely definite standard you maintain in the quality of your product, could help but respect your work.

If it were possible for every one of your customers to know and to understand your methods of manufacture, your solution of the problems of distribution, and the accuracy of your measurement of gas consumption, I know you would have the unqualified respect of your customers.

The trend of your convention discussions, of your public policy in general, and of your treatment of individuals in particular, shows clearly that you understand the value of the respect of your customers, and that you are earnestly trying to deserve and to secure their respect.

### The Customer Does Not Know Gas

Unfortunately the customer does not know and could not appreciate the work you are doing in getting his gas to him. He does not know how carefully the heating value of gas is predetermined, nor how reliable the modern gas meter is in its measurement of gas flowing through it. More than that, he is contentedly oblivious to your efforts and even to your existence, so long as everything goes well, and so long as he thinks his gas bill remains within reason. It is when things don't go right, when his service is interfered with, when his bill seems too large, when he wants immediate attention in the installation of gas in his new home, that he becomes acutely conscious of the service which you render. It is then that he must be impressed by your capability, by your courtesy, by the smooth operation of your company. And that is why, to my mind, the organization of your office, where you must make your only recognized bid for the customer's confidence and respect, is equally as important as the condition of your boilers or of your mains.

If you can care for his needs courteously, accurately, and promptly he will remember you with respect. If he realizes that your records and your methods of handling him are up-to-date, reliable, dependable, he will respect you, and will have a good word to say for you.

*Delivered at 1925 Convention of the Southern Gas Association.

It is manifestly impossible for me to pretend to present to you a system or method for handling the office organization as regards the dealings with customers that would fit every company represented here; and it is not my intention to attempt the impossible. I do wish to point out to you, however, some of the common office problems that must be met by every company, however large or small it may be, in dealing with its customers. And I do think it possible to present to you certain fundamental principles upon which your office must be organized if it is to command the confidence and respect of the outsider.

### Three Important Problems

In order to present these fundamental principles I wish to consider three typical problems of customer relations involving the co-operation of two or more departments; and in order to make the handling of these problems as concrete as possible, so that the fundamental principles may be clearly illustrated, I shall discuss typical office organizations provided for meeting these typical problems.

These three problems are:

(1) The execution of orders for the installation or removal of service.

(2) The handling of complaints.

(3) The maintaining of accurate customers' records.

### The Handling of Service Orders

In no other instance do you have as excellent an opportunity to impress your customer favorably as in your handling of his order for the installation or removal of service. When the customer gives you a service order of this kind he deserves your utmost consideration. He expects you to realize, and you should realize, that he is moving. All of us have had the experience of moving, and all of us know that moving presents worries and trials, and requires the expenditure of much time and patience. Consequently, when one of the problems of moving is lightened by you, it means a lot toward securing the good-will of the customer.

You should have an absolutely definite routine for the rapid execution of service orders; a definite schedule, definitely adhered to, for the handling of different classes of orders; and you should know, absolutely at any time, the exact location of any order in process of being executed. You should make it easy, very easy, for a customer to place his order; and you should always be able to promptly give him information concerning its status.

### The Employees Who Handle the Orders

Before discussing the routine office organization involved in handling service orders, I should like

to speak of the employees engaged in handling these orders. The very best men you can afford should represent your company in these dealings with the customer. They should be educated and refined, gentlemanly in manner and appearance, and they should be thoroughly trained. Their training should be continuous, unceasing. It should be formal, through regular systematic instruction. It should be carried on in regular meetings where the problems to be met are discussed, and the carrying out of policies is planned. The man who deals with the public can never learn enough. More than any other employee he must keep growing, must be constantly inspired and keyed up. And he must be paid for his services, as much as you can possibly afford to pay. He should know the problems to be met in handling the orders which he takes. He should know the exact routine of the order, from the time he takes it until the customer's account is actively entered on the books of the company. Unless he does know, he cannot possibly represent his company intelligently and capably.

### Simple Routine Required

The routine for receiving and executing service orders should be as simple as possible. The application form which the customer signs should be brief, and one form should serve for any class of service application. The application should be immediately recorded and a record of its progress should be instantly accessible at all times. This is the fundamental principle of office organization in the handling of orders of any kind: Immediate availability of any order in process of execution. This principle applies as equally to sales orders and purchase orders as it does to service orders. Wherever there are orders in transit there should be a pending file, where every unexpected order may be found at all times. And if a particular order is not in this file at any time there should be only one reason: the order has been completed.

A complete discussion of follow-up methods would require much more time than I could possibly devote to it in a general discussion such as this. I have found many complicated methods of following-up orders, most of them wasteful of time and equipment, many of them ridiculous. The proper method depends, of course, upon the office and upon the particular problems to be met. But in every case a follow-up system is a fundamental part of the routine of handling service orders.

It is also essential that the man dealing with the customer have ready at his hand all of the service information that can possibly be given him. He should have records that will give him assurance in talking to the customer. And he should be trained to use these records.

### The System Used by the Georgia Railway & Power Company

A trained corps of counter men is employed to deal with customers. These men are trained in the routine of handling orders by the study of a department manual, which sets forth the policy of the company, explains the forms used, and discusses the problems to be met. The men are also trained by regular weekly meetings.

They have accessible a complete record of every service and of every customer of the company, including a description of every street in the city. They can tell instantly whether the company can supply service at a given location, whether a meter is already available at the location, or whether a meter must be set before service can be given. This record also gives them the number of the meter serving any location in the city, the length of time a customer has had service at any address, and the exact page a customer's account may be found in the bookkeeper's ledgers. Within fifteen minutes after an order has been received, at the counter or by telephone, a record of the order is available for the use of the counter man. This record is kept on visible record equipment.

### The Pending File

In addition to this card record there is a pending file, which contains every order which is in process of execution. This file is as accessible to the counter men as is the card record of customers' services. If the card record file shows that an order has been placed for the installation or removal of service, the pending file shows the actual order, until the order is completed. Both the card record and the pending file have direct connections to the telephone clerks, so that information can be secured for a customer without transferring his call. The telephone clerks can talk directly to the clerks in charge of the records and give direct information to the person calling.

Every order that is not executed within a definite time automatically comes out of the pending file for attention, and the reason for its not being executed is found. In some cases this necessitates a call on the customer; in others merely a tracing of the routine within the company.

An attempt has been made to win the respect of the customer, first by the method of dealing with him and second by being able to speak definitely and accurately to him at every stage of the execution of his order.

### The Handling of Complaints

The second of the three problems which I wish to discuss is the handling of complaints. Complaints from dissatisfied customers are as certain to come as are orders for the installation or removal of service. No matter how perfect your service you will have complaints. And experience has shown that from eighty to ninety per cent of all complaints received by utilities furnishing gas and electric service are unjustified. I should not hesitate to say that probably half of these complaints are evident to the one who receives them as being in the unjustified class, even before an investigation is made. I know I am not telling you anything new about complaints. You know that customers are unreasonable, unthinking, in the majority of their complaints. And

(Continued on page 248)

# As The Journal Views It

## TIMELY ADVERTISING

One of the most important and most widely discussed topics during the past few weeks has been the controversy between the operators and miners in the anthracite coal field. While at first it appeared as if a strike would not ensue, nevertheless, today, entirely disregarding the interests of the public who use hard coal in heating their homes, the miners and operators agreed to disagree and now there is no coal being mined. Reports have it that the miners are thoroughly enjoying the strike, taking advantage of their idleness to have a good time, and not at all apprehensive of the future because of their large families composed of good wage earners. while the operators are also in good humour because they have planned and are going to get higher prices for their product. Thus, as usual, the public has to suffer while those who are responsible apparently profit.

This is not intended as a diatribe against the coal industry, coal miners and coal operators. It is written entirely for the purpose of calling the attention of the gas men to a situation which exists at the present time and has existed for many years and which is decidedly both uncomplimentary and harmful to the gas industry. The newspapers have been writing editorials on the need for substitutes for hard coal and urging the people to go out and use other fuels with the intent purpose of bringing the hard coal industry to its senses. This is a very logical undertaking and it will be a very effective means of visiting the wrath of an outraged public upon those who are responsible for the coal strike and for high prices that are now being charged for anthracite. But, in composing their editorials, the writers, while advocating the use of oil and coke as well as soft coal and even peat and lignite in place of anthracite, have entirely forgotten that gas is by far and large the most advantageous fuel that could be used in place of hard coal for house heating.

The question is, wherein does the fault lie that the average editorial writer knows so little about the value of gas as a house heating fuel? The answer is that it must be with the gas man himself. It is true that the gas man of today is thoroughly sold on the value of gaseous fuel for industrial and house heating purposes. It is true that he has the greatest confidence in the future of gas. But, while the gas industry and the men who compose it may thoroughly understand the advantages to be gained from the use of gaseous fuel, and may be thoroughly convinced of the soundness of the proposition that "If it is done with heat, it can be done better with gas," nevertheless this does not apply at all to the average citizen.

There is need today in the industry for advertising of a character that will bring to the attention of the public the fact that gas is THE fuel for all industrial and domestic purposes. The average citizen today understands and is firmly convinced that electricity is the supreme power medium. He did not understand it so very long ago, but the electrical man has seen to it that this idea was grilled into him. Today the average person feels as if he had always know that electricity was the great medium for producing power. What the electrical man has done, the gas man can do as well. Furthermore, he must do so, if he really desires to gain the goal that has been set for him.

The American Gas Journal took it upon itself to write a letter to the editor of one of the metropolitan dailies in which there appeared a short note on the universal substitutes for anthracite and to call the attention of this editor to the fact that gas was omitted from his editorial in spite of the fact that gas is really the best fuel for house heating purposes. The publication of this short letter in the aforementioned newspaper has already resulted in certain inquiries at this office. This brief bit of news attracted attention and it shows clearly the value of popularizing the ideas and convictions that gas men possess themselves by advertising them to the public.

Now is the time to bring to the attention of all communities in which hard coal is used the fact that

they need not fear the results of a coal shortage because they have ready at their command a far more efficient, more sanitary and cleaner fuel—gas. Such advertising, such popularization of gas, is bound to bring results. It remains today one of the greatest problems in the gas business, namely, convincing the gas man that it is necessary for him to disseminate his ideas amongst the general public by means of a complete, scientific plan of advertising, and in this way to build up in the mind of the average citizen the same respect for gas as a fuel that he now has for electricity as a power medium.

# Utilities Must Tell Their Story

## The necessity of public utility good-will advertising

*Norwood W. Brocket*

Director of Public Relations, Puget Sound Power and Light Company

THE average public utility has, in the past, been the poorest salesman found in any business. This is especially true when it comes to selling itself to the public. This condition is not to be wondered at. In the production of electric energy, gas or telephone service, and in the maintaining of uninterrupted service, these industries have necessarily developed the best engineers in the world and that is equally true with our accountants. Such a utility is generally the only one furnishing a like service in the territory which it serves. Since we are dealing with a commodity which is almost essential in every home, it has not been necessary, until recently, that we pay any particular attention to the sales end of our business. When people desired our service, they either telephoned or came to the office and purchased it under the terms and conditions and at the price laid down by the state regulatory body.

### Necessity for Advertising Did Not Appear

Nor did it apparently occur to these utilities that it was necessary to advertise the company itself, the service it was giving or what it was trying to do to help build up the community. For years, we proceeded upon the theory that any business institution which treated its patrons courteously, which tried to give the best possible service at the lowest possible cost and which did its full share in the civic activities of the community, must necessarily, in time, win the good-will of that community.

Unfortunately, this seems to be true of every other line of industry except the public utility business. No utility company has, even today, the same measure of good-will with the people which it serves that is enjoyed by the other business houses in the same locality and the reason for this is very obvious. No other industry in the world has been subjected to the same constant malicious attacks by the demagogue and the office seeker. When a candidate was unable to obtain votes by reason of his own unfitness for an office, he was always assured of a certain support by the public utilities in his district. Following the belief that we were to be judged by what we really did and not by what some self-seeking individual said about us, we complacently permitted these attacks to go unchallenged and unanswered and neglected to place the truth before the people.

### Must Tell as Well as Act

We have now learned, however, that we must not only give good service at reasonable rates, but we must also tell the people we are doing it and publicly disprove the unwarranted attacks made upon us. I know of but two ways in which this can be done—by the spoken and the printed word. I believe the spoken word to be far more effective with the limited number of people that can be reached, but to carry our message to the vast majority of our customers, the printed word must be used. Unquestionably, the most effective method is through the advertising columns of the newspapers.

Those utilities which adopted this policy, immediately met the full fury of those demagogues whose chief stock in trade was the vilification of the utilities. They resented having their statements challenged and disproved and realized that their power would be broken when the truth about the utilities became generally known. In self defense, they immediately termed all such efforts by the utilities "propaganda" and glibly talked of "millions" being spent by the utilities in an effort to deceive and mislead the people. Some of the very newspapers whose advertising departments had convincd us of the necessity of such advertising, gave free space to those who criticized us for doing it and in a few cases, even took us to task in their editorial columns. Gradually, however, the people are beginning to realize that the things which we are telling them are true and they are beginning to wonder why our industry is not permitted to conduct its business just as every other business is conducted—unhampered by constant political attacks.

(Continued on page 254)

INDUSTRIAL GAS LESSONS

IF IT'S DONE WITH HEAT YOU CAN DO IT BETTER WITH GAS

# Lesson No. 88

## Heat and Change of State

### Raising the Boiling Point

The tabulation which has been given above indicates the effect of the addition of various chemicals to water in their raising the boiling point of the same. There is a general formula which may be developed for this phenomena just as in the case of the lowering of the freezing point.

If the symbol w indicates the weight of salt dissolved in one hundred parts of the solvent, and if m is the molecular weight of the substance that is dissolved, then the rise in the boiling point will be found in the following equation:

$$\text{Rise of boiling point} = 5.2 \times \frac{w}{m}$$

Thus, for example, if eight parts of sodium hydroxide are dissolved in 100 parts of water, w is equal to eight and m is equal to the molecular weight of caustic sodium, which is 40. Then the rise in the boiling point of water by dissolving this quantity of sodium hydroxide in it may be found from the following calculation:

$$\text{Rise in boiling point} = 5.2 \times \frac{8}{40} \text{ or } 1.04 \text{ degrees C.}$$

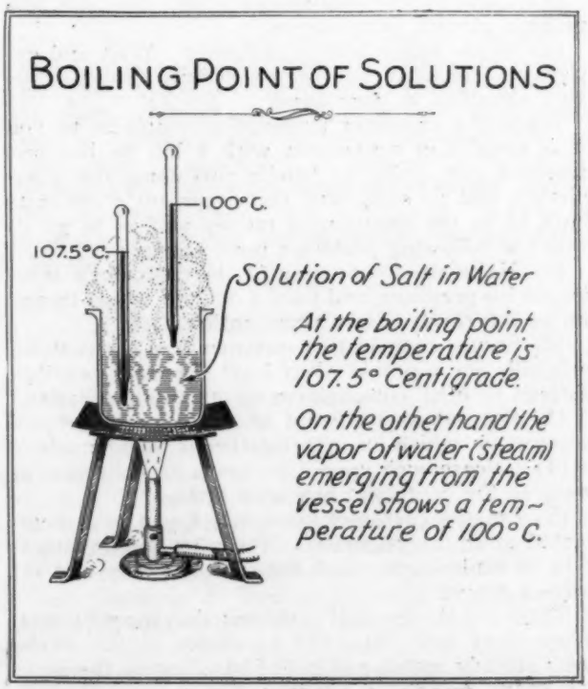
In other words, the boiling point of the solution will now be 101.4 degrees C. instead of 100 degrees C. The same calculation can be made for other substances dissolved in water or in fact in any other liquid.

### Boiling Points of Solutions

This formula enables the calculation of the boiling points of solutions. A solution of a solid in a liquid is a system in which the solvent, or the liquid, is generally volatile and the solid or solute is not. As heat is applied to such a solution the solvent evaporates, and the temperature at which evaporation takes place will depend, of course, on the nature of the solid that is dissolved in the solvent and the amount of it in solution. Then, as the solution becomes more and more concentrated due to the removal of the solvent, the boiling point gradually rises. It must always be remembered that in order to remove the solvent, say water from a salt solution, containing 35.5 parts of the salt in one hundred parts of water, the temperature of the solution must be brought to its boiling point and maintained at the boiling point as solvent is removed and as the boiling point is raised. The boiling point of such a solution is 107.5 degrees C. and not 100 degrees C., but when a thermometer is held in the vapors evolved from the solution, the thermometer will register the boiling point of the solvent, water, or 100 degrees C. in place of 107.5 degrees C., owing to the condensation of the solvent on the bulb of the thermometer.

### Change of Volume During Evaporation

In former lessons of this series it has been pointed out that when a liquid is heated, it will expand as a general rule. Thus it is not strange that when a mass of liquid is being brought to the boiling temperature that the volume of the liquid should in-


BOILING POINT OF SOLUTIONS
100° C.
107.5° C.
Solution of Salt in Water
At the boiling point the temperature is 107.5° Centigrade.
On the other hand the vapor of water (steam) emerging from the vessel shows a temperature of 100° C.

crease and materially so. As the temperature increases, the density of the liquid gradually approaches that of the vapor derived from it. In other words, the liquid constantly becomes increasingly lighter, for while the weight of the liquid remains the same the volume becomes larger. Hence this process goes on until the liquid has been heated to so high a temperature that its density becomes the same as that of steam and at this point, of course, the two conditions become physically identical.

## OFFICE ORGANIZATION AND CUSTOMER RELATIONS

(Continued from page 244)

I do not intend to attempt a discussion as to the policy to be pursued in handling complaints. There has been some excellent material on this problem published by the Public Service Company of Northern Illinois; and the manual of the Georgia Railway & Power Company to which I have already referred contains a concise statement of the policy of that company in dealing with customers who have a grievance.

I shall discuss here only the office routine necessary for the successful handling of complaints, noting only these two commonly accepted maxims of complaint policy:

### Five Important Rules

(1) Treat every complaint as a just complaint, and make a careful examination.

(2) Never argue with a customer. Wait and explain to him when you have a definite report of his own situation in your hand.

When the customer presents a complaint to you it is usually in connection with a bill he has just received. In order to handle this complaint completely, and to safeguard your company's interests both as to the question of money and as to goodwill, the following problems must be met:

(1) Make an examination of the customer's service, on his premises, and have a definite report turned in, as the result of the examination.

(2) Secure comparative statements of the customer's bills for a period of at least a year if possible. Fifteen months' comparative statements are better.

(3) Prevent any attempt at collecting an unpaid account on which an investigation is being made.

(4) Release such unpaid accounts for collection as soon as the complaint has been settled.

(5) Let the customer know when you have completed your investigation. Never let an investigation be made from which the customer does not receive a report.

These are the general problems that must be met. They carry with them the inevitable routine problems already mentioned in the handling of the service order, namely, a pending file where all complaints are immediately accessible, no matter what the status of the investigation may be; a follow-up system which not only insures the completion of the investigation within the company, but also insures the informing of the customer when the investigation has been completed.

### The Maintaining of Accurate Customers' Records

The third problem of office organization involving customer relationship is that of accurate and complete customers' records. It is not enough to provide for starting these records correctly and promptly. They must be susceptible to change to meet changing situations. No record of customer relationship is fixed. There are constant demands for such corrections as changes in mailing address, changes of street names and numbers, changes of bookkeeping reference, and even changes of customers' names. And whenever a customer's record is changed in one place in your company, that change must be made in every record concerning the customer. Unless this is so you cannot posibly handle your dealings with the customer to your own satisfaction much less to the satisfaction of the customer.

The difficulty in changing customers' records in different departments of a company, or in different parts of the same department, is usually found in the fact that there is either no definite routine set up for handling this problem, or there is no definite central responsibility for the control and supervision of this routine.

A change notification is as much an order requiring execution as is a service order or complaint. It should be routed through the company, to the various records concerned, as definitely as is any other order concerning a customer. And again, in organizing and operating such a routine we meet the fundamental problems of a pending file and a follow-up method.

### Ideal Notification Routine

Without knowing the specific organization of a company it is again impossible to set up an ideal change notification routine. But most companies have some or all of the following records to be changed, whenever the customer's status on any one record is altered:

(1) Meter Records.
(2) Location or Address Records.
(3) Deposit Records.
(4) Bookkeeper's Records.
(5) Contract Records.
(6) Mailing Records.

Unless there is a definite routine in your company for recording changes in any or all of these records which you may have, you are certain sooner or later to have to confess to a customer that you have slipped in handling the record of your service to him. And a slip in this respect will stay in the customer's mind longer than any other possible slip you can make, short of actually depriving him of service.

(Continued on page 254)

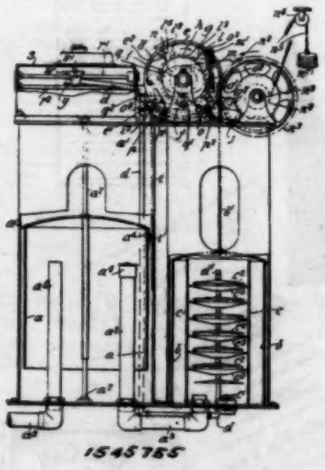
# PROGRESS IN GAS TECHNOLOGY
## *Domestic and Foreign*

### CARBONIZATION OF BITUMINOUS COAL

THE object is to obtain a greater elimination of sulphur compounds during the carbonization of bituminous coal, so that the coke obtained is more suitable for metallurgical purposes. The coal is mixed with a material such that when the mixture is heated a high proportion of reducing gas is obtained, the material being of such thermal stability at 400°-600° C. that it does not tend to bind the coal. The preferred material is anthracite, or a semi-bituminous coal which may be as mined or weathered, or bituminous coal which has been weathered or carbonized below 600° C. or peat or lignite or the residues obtained by carbonizing them below 600° C. The essential feature is that the mixture should produce a high percentage of hydrogen or other reducing gas, and that the added material should be inert between 400° C. and 600° C.—British Patent No. 236,002.

### OIL GAS APPARATUS

OIL gas is made from air and hydrocarbon in an apparatus which is shown in the accompanying illustration. The installation consists of a gas holder which is seen to the left and a carbureter which is seen at c. A bell b, surrounds the




carbureter. Means are also provided consisting of a combination of a shaft, pulley and rope for raising the bell. The fall of the gas holder is communicated by means of a system of ratchets to the bell, so that the production of gas is automatically maintained.—(U. S. Patent No. 1,545,755.)

### GASIFICATION OF LIGNITE

THE efficient production of a satisfactory gas is promoted by regular addition of the raw lignite in small quantities at a time to the fuel column in the gas producer; uniform distribution over a large grate area of a carefully regulated low-pressure air blast with the correct proportion of steam added; regular removal of ash and maintenance of a suitable ash layer on the grate; suitable depth and temperature of the incandescent fuel bed; continuous testing of the gas; and thorough supervision of the process. The type of producer preferred has a revolving grate with automatic removal of ash. The average composition of the cooled, dust-free gas without tar recovery is $CO_2$ 3—5%, CO 25—30, $H_2$ 10—13, $CH_4$ 1.2—3, CnHm 0.3—0.6, $O_2$ 0.2%.—(Z. angew. Chem., 1925, 38, 173—179.)

### MIXED GAS

AT the 48th Congress of Technical Society of the Gas Industry of France a paper was delivered on the Strache generator for direct production of mixed gas. In this paper it was indicated that mixed gas generators produce a gas containing 32,000 calories per cubic meter which corresponds to the complete gasification of coal and lignite without the production of coke. These mixed gas generators also produce a mixed gas of the thermal value of 36,000 calories per cubic meter which corresponds to the complete gasification of the carbon as above, and in addition to carburation by pyrogenation of the primary tar at the point in the apparatus where it is condensed. When such a gas is made, the tar output is considerably reduced.

### INDEX FOR JULY AND AUGUST


Page

**A**

Ash Ejector for Gas Producer..... 11

**C**

Calorimeter (Gas) ..... 181
Carbon Monoxide, Detection of..... 31
Carbon Monoxide, Absorption Agent for..... 137
Carbonization (Low Temperature)..... 31
Coal, Coking and Swelling Constituents of..... 115
Coal, Swelling of During Coking..... 77
Coal, Hydrogenation of..... 95
Coke, General Report on..... 77
Coke, Cooling of, and Heat Recovery..... 11

**G**

Gas (High B.t.u.), Manufacture of..... 137

Gas, Determining Composition of..... 161

P

Pipette (Gas Absorption)..... 53
Producer, Fuel Bed Reactions in..... 11
Producer, Effect of Steam on..... 77
Producer (Tubular) ..... 115
Producer (Gas) ..... 161
Purifier (Gas) ..... 137

R

Retort (Carbonizing) .....77, 161
Rotary Oven and Low Temperature Tars..... 77
Retort (Low Temperature)..... 95

S

Stopper (Gas Main)..... 53
Spent Oxide, Utilization of..... 137

V ....

Vertical Retorts, Heating of..... 181

W

Water Gas, Manufacture of.....95, 160
Water Gas, Oxygen in Manufacture of..... 115

# Advertising Gas Here and There

*William H. Matlack*

THE advertisement in the upper left hand corner of our page was used recently by the Westchester Lighting Co. to stage a combination sale; the one set on an angle left center was used by the Wainwright Music Co. to tell folks that "the Oriole gas range is a bird." The extreme lower left and right are reproductions of mats that your newspaper can furnish you free of charge, for they are from the Meyer-Both newspaper service. The small reproduction at the top center is that of a gas bill sticker used out in Portland by the Portland Gas and Coke Company, while the three grouped in the center come from the Public Service Gas Co.

Don't they stand out! They are like the one in the lower center from the Gas and Electric Co., Baltimore,—"never meant to be buried"—they are framed by WHITE SPACE. The little "chat" in the upper right hand corner comes from Long Island, while the Dalton Fixture and Supply Company uses the one on an angle at the right.

Combination Offer
$72
A Revolution in Cooking
See it boil 4
$5 to $10 Allowance
$5 and $10 Allowance
smoothtop
A Chat With The Gas Company
Flocks of Orioles
Prices Reduced on All Orioles
The Wainwright Music Co.
$10 for your Old Gas Range
This Special Offer Is Good For "Limited Time" Only
TO-MORROW is second day of the sale
The Gas & Electric Company
USE GAS
Gas Serves the Public! Take Advantage of It!

## TECHNICAL PROBLEMS IN A GAS WORKS

(Continued from page 240)

wards the direction of the flue gas ducts or if a gas flame appears in the latter, then a big leak will have been discovered. This method is scarcely better in any way whatsoever than the one that has been described in the second case mentioned above. It is always necessary to test the work of the builders of the furnace with the aid of an Orsat apparatus.

### Making the Gas from the Leaky Joints Burn

The last method consists in making the gases that steam forth from the leaky joints burn. If the gas pressure is insufficient, then a gas compressor or a compressed gas machine must be employed. In both cases a driving agent must be employed, which is preferably an electric motor. It is more advantageous and economical to use the compressed air gas machine, for this enables a sufficient pressure to be maintained all through the test. In the construction of the burner care must be taken that the compressed gas flame does not burn away from the tip of the blast burner but burns quietly and surely, so that it is not extinguished when the test is being made. Then again the point of the burner must be curved so that it is easy to get into both horizontal and vertical ducts in the retort setting.

### Description of the Apparatus

The light apparatus which is used in the Cologne gas works and which can be set upon a table contains as well a benzol carburettor which is made in the form of a cylindrical iron vessel, possessing a perforated plate which is placed a little above the point at which the gas enters the vessel. Cotton waste is packed on this plate and fills the entire cylinder up to the point where the gas leaves and this cotton waste is kept wet with benzol which flows down from a funnel which is fastened into the removable cover.

The benzol-carburetted, compressed gas flame gives a light of considerable intensity. Another reason for using the carburetted gas is that the burning flame requires considerably more air than the flame of the non-carburetted gas. Small quantities of gas, which penetrate through the leaky spots in the firebrick, will burn that much more strongly and thus will be that much more visible to the eye, the more air the gas requires for combustion.

### Use of the Apparatus

When a stream of this gas is passed over a joint, then, because of the high pressure of the gas, the flue dust is blown away. Then, if there is a leak at this point, unburnt gas will penetrate through the leaky point into the interior of the retort setting and become ignited, for the fire brick lining is red-hot and the ignition temperature of the gas is exceeded by war. Otherwise, the gas must be made to ignite by inserting a flame through another small opening in the brickwork. In this manner at any point where there is the slightest leak the burning of the highly luminous gas within the retort setting and passages is immediately detected. Hence the mason knows at once where the trouble is and he can immediately remedy it. After he has finished with his work, the joints are tested once again to see that they are perfectly tight.

(In the original article a detailed description is given of the machine and of the cost of the various parts as well as the expense involved in its use.—Trans.)

### Results Obtained With Machine

In all about eight vertical retort installations were tested with this apparatus and the carbon dioxide content in the flue gases was raised to 18.2 per cent. In one installation which had been rendered free from all large leaks the draft had to be reduced from eight and one-half to six millimeters as the retorts were heated too hot with the higher draft. In all cases the heating was uniform and easily controlled by shifting the position of the dampers. After the leaks had been fixed the temperature of the flue gases varied from 400 to 450, while these temperatures were from 510 to 730 before the repairs were made. Thus in one case the temperature was reduced from 730 to 400 degrees C., which clearly indicates the saving in combustible that ensues when the setting of the furnace is made absolutely tight.

### Removal of Combined Organic Sulphur from Gas

A most important matter is the removal of the sulphur that is combined with organic matter present in the coal gas. It has been observed by many gas men that calorimeters and gas heating apparatus, which have been in constant use, suffer much from the action of sulphurous acid and in certain cases the metal is entirely eaten through. If the burnt gases that issue forth from a calorimeter are examined, one is astonished at the intensity of the sulphur dioxide odor.

The presence of compounds in gas which escape purification and which give rise to the formation of sulphur dioxide when the gas is burnt is a matter that has given rise to much trouble in special installations where gas has been employed an industrial fuel. This refers particularly to the use of gas in the manufacture of glass. (In the original article the author goes into considerable detail to explain the trouble with the gas when used for the manufacture of glass, the means that were taken to discover that the gas was at fault and the various defects that were caused by the gas in the glassware.—Trans.)

### Content of Organic Sulphur in Gas

The question then arises, what is the content of organic sulphur compounds in the gas, what are the

characteristics of these compounds, how do they exert their injurious action and how can they be removed? In a yearly report of the Cologne gas works it was shown that the gas made contained 50.2 grams of sulphur in one hundred cubic meters. This was the average in the year 1906 to 1907. Then when water gas was introduced and the coal gas made in a vertical oven, the average content of sulphur in the gas was reduced to 30 grams per hundred cubic meters, that of the water gas being 27.12 grams per hundred cubic meters. The nature of the sulphur compounds that are found in the gas is dependent to a certain extent on the character of the process which is employed in the manufacture of gas, but as a general rule it consists principally of carbon disulphide in the proportion of 95 per cent.

As far as the injurious action of the gas in its use for glass manufacture was concerned, it was found that this action ceased when the sulphur content of the gas was decreased to ten grams per hundred cubic centimeters.

### Removal of the Sulphur

The removal of organic sulphur from the gas is a problem that does not admit of easy solution. The process that is employed for this purpose must be both cheap and easy to operate. Large apparatus and high costs must be avoided if the process is to be a commercial success. The author first tried to remove the organic sulphur by means of a concentrated solution of milk of lime, washing the gas with this reagent, both at an elevated temperature as well as at the ordinary atmospheric temperature. Negative results were obtained both with coal and water gas.

The author was then reminded of certain experiments which he had made in the past, namely, on the heating of flowers of sulphur with iron filings to give iron sulphide. The question then suggested itself, is it possible to make the sulphur in the gas combine with the iron by leading the former overheated iron filings? The first experiments that were made gave good results, for the content of organic sulphur was reduced from 28 to 14 grams per hundred cubic meters. It was then found that the temperature at which the operation was being carried out was too high for practical purposes.

### Nature of the Decomposition

What was the nature of the decomposition that took place between the organic sulphur compound and the heated iron filings? It was possible to detect the formation of carbon, of sulphide of iron and hydrogen sulphide. In order to study this process a little more carefully coal gas and water gas were led through carbon disulphide before they were purified, so that as much as thirty grams of carbon disulphide were absorbed by twenty liters of gas. The three hundred grams of iron filings which were in the absorption tube could not remove so high a proportion of carbon disulphide from the gas. About 77 per cent of the 60 grams of carbon disulphide which was first added to the gas were absorbed and in further experiments the removal of the organic sulphur was only 56 per cent effective, in which case 100 grams of carbon disulphide were present.

The spent iron filings were found to contain 4.4 per cent of the carbon which was separated out. Then it was found to contain 16 per cent of sulphur. When the gas was passed through a soda solution, the latter was found to contain mercaptans. A certain amount of sulphur was still present in the gas, this sulphur compound being burnt by passing the gas over platinized asbestos in the absence of excess air with the formation of sulphur.

### Conditions for Removing the Carbon Disulphide

The author is of the opinion that the temperature must not be too high in the process of removing carbon disulphide from gas. It is also advisable from the standpoint of the reagent that is employed in the process that the conversion take place as soon as possible after the sulphuretted hydrogen reaction, that is after the removal of this impurity from the gas. The rest of the sulphur impurities in the gas, which consist of carbon, hydrogen and sulphur, are decomposed at high temperatures only. It is also possible that these elements will combine with one another after the original compounds have been broken down. Thus, if it is assumed that the thirty grams of sulphur, which are contained in one hundred cubic meters of the gas, consisted of 95 per cent carbon disulphide, which is separated out in toto, then there must remain in the gas five per cent of sulphur. Consequently $30. \times \frac{5}{100}$ or 1.5 grams must be present in the gas. There were actually found 1.9, 2.1 and 1.5 grams of sulphur in 100 cubic meters of gas.

### Condition of Spent Filings

In order to establish whether or not the iron filings, when they contained 16 per cent of sulphur and 4.4 per cent of carbon, had been used up and could not absorb any more of the impurities from the gas, coal gas was led over the heated mass. It was found after passing through fifty liters of the gas that 320 grams of sulphur were absorbed as sulphuretted hydrogen by the soda solution, and that 300 grams were still present in the gas, which made a total content of 620 grams of sulphur in one hundred cubic meters of the gas. It is possible that this sulphur is in the form of precipitated sulphur, but then again it is likely that sulphur containing hydrocarbons might also have been formed, which are not decomposed. In another test made with coal gas with the mass of iron filings, contaminated with impurities, it was found that the sulphur content of the gas was reduced from 30 to 20 grams in one hundred cubic meters.

### Heat Required

The amount of heat that is required to effect the decomposition of the organic sulphur in the gas is

very little. Iron filings is a cheap material and the equipment is not costly. The interesting question is whether or not the process can be put to practical use in the gas works.

The composition of the gas was tested before and after this treatment and the following tabulation gives the results of the analyses which clearly show that the process did not affect the composition and accordingly the properties and quality of the gas in any appreciable manner.

**Composition of the Gas**

| | Before the Test | After the Test | After the Test |
|---|---|---|---|
| Carbon dioxide | 3.5% | 3.4% | 3.5% |
| Heavy hydrocarbons | 2.2 | 2.2 | 2.1 |
| Oxygen | 0.8 | 0.7 | 0.6 |
| Carbon monoxide | 13.9 | 14.0 | 14.2 |
| Hydrogen | 46.6 | 46.6 | 46.3 |
| Methane | 22.7 | 22.7 | 22.8 |
| Nitrogen | 10.3 | 10.4 | 10.5 |

## INCREASING SALES OF GAS IN THE SOUTH

(Continued from page 242)

to the condition of their water heating appliances. This list was not only valuable to them for sale of water heating systems, but to keep record for their salesmen for other gas appliances, and by selling them this file information along with our campaign we were able to show them the necessity for giving us an up-to-date campaign list.

Too much stress cannot be put on this campaign list as we found with all our extended effort that considerable of the lists were found to contain names that were not possible prospects, including renters, apartment dwellers and various others.

Our campaign mailings were arranged that a piece of mailing would be put out each week, preferably on Friday.

We obligated them that they should spend a certain sum each week on local newspaper advertising; this sum can be enlarged above their usual inclination if stress is brought to bear of the amount of money we are spending for advertising, such as mailing matter, circulars, window trim and sales assistance.

You will have to take considerable part in the direction and substance for their newspaper copy and the insertion of their advertisements.

### Start of Campaign

We arranged a satisfactory definite date for the start of their campaign, preferably on Monday morning, and previous to this Monday, say starting the previous Wednesday, we had them run a teaser ad, and on the Sunday previous to the opening Monday we had them use a full page, when possible, but would not consider anything less than a half page. This was adhered to and following at no less interval than three times a week during the campaign a quarter page advertisement.

Our first mailing was placed on Friday, and followed thereafter on each Friday. The first mailing tying in with the first Sunday advertisement, and each Sunday advertisement thereafter the prospect had a mailing piece to mull over.

Their towns were divided into sections according to the number of salesmen, providing each salesman with a distinct territory.

### Holding School

A few days ahead of the campaign start, we do not believe in having meetings too far ahead of the time lest information be forgotten, we held school, as it were, for the employees and salesmen (it is very important that the fitters and shopmen and particularly the Trouble Shooter is in attendance) at which we dis-assembled the heater, explaining construction in detail, showing all parts, their construction and function, capacities and requirements for different requirements. In a great number of instances we held three meetings, although care must be exercised in not creating an unrestfulness that will border on loss of interest. The fitter and repairman should not be eliminated from the sales talks that are given as they have a great deal more to do with making sales stick than most companies give them credit for. A great responsibility rests on our special representatives that they give to the salesmen when out on the territories with them educational instruction not only in salesmanship but sizes of heaters to meet requirements, and only such special representatives as are able to do this should be invested with the work.

### Aggressive Selling

If a commercial department of any gas property handled the sale of coke and tar as aggressively as the appliance department is now handled in most gas plants, I am sure the result would mean greater profits, more business and cheaper gas for the consumer.

For each one dollar increase or decrease in the selling price of coke the cost of gas will increase or decrease above five cents per thousand or more in the majority of cases.

For each one cent increase or decrease in the selling price of tar, the cost of gas will increase or decrease nearly one and one-quarter cents per thousand.

The so-called by-product ammonia ($NH_3$) can be made valuable, but it is questionable if it pays in small plants, although it is unquestionably a profitable business for larger plants.

The manufacture and sale of coke has been treated as a technical problem in our association work. This is only half the effort required to make this valuable fuel a profitable revenue producer.

(Continued from page 248)

### Other Problems

I could go on indefinitely discussing office routines in connection with customer relations. For example, the handling of sales of appliances, particularly on the installment plan, presents problems of routine very similar to those I have already discussed. The collection routine, both for service accounts and for merchandise accounts, involves similar problems. In fact, every dealing with a customer should be provided for by a definite policy and a routine devised to carry out that policy accurately, effectively, and economically.

I should like to emphasize again that this does not mean that the customer is to be handled in a machine-like manner, without regard to his individuality. One of Thomas Edison's most definite rules is to reduce to routine everything that can possibly be so reduced. When this is done he has more time for original thinking. The individual who can handle routine and detail accurately and quickly when necessary is the one who is usually the originator of larger plans.

So it is with our dealings with customers. The more perfect our office routines, the more definitely available our information in regard to these routines, the more time we have to devote to the individual problems of our customers.

### General Principles

The general principles of office organization which I have attempted to develop in this discussion can now be stated very briefly. If these principles are carefully followed, the routines, the forms used, the method of control may vary widely, but the results will be assured. I have mentioned them in each of the problems I have discussed, and I know that I can leave with you nothing of general value that is always capable of particular adaption beyond these principles. They are:

(1) Accurate information immediately accessible for the employee who deals with the customer.

(2) A central pending file for every order, of any kind, until that order is completed.

(3) A follow-up method that insures the handling of every order to its absolute conclusion.

No matter how large or how small your company, no matter whether it sells only gas or several services, these principles are necessary for the successful handling of your customer relations, and for the insuring of confidence, upon which is based respect.

---

## UTILITIES MUST TELL THEIR STORY

(Continued from page 246)

### Much Publicity Needed

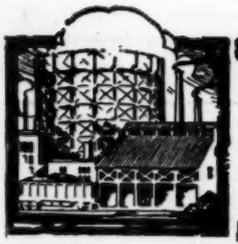
Please do not infer that I believe that our work has been accomplished. It has only been started. When you can truthfully tell the people that, under regulation you are only permitted to earn a reasonable return in the shape of interest and dividends upon the actual value of your properties and upon the money honestly and legitimately invested to make the service possible, when you can tell them that, since 1913 the cost of living has gone up sixty-five per cent, while the cost of electric energy has actually decreased, when you can tell them that the bill for the average residence consumer for electric service, including not only his lighting but all the socket appliances he uses is less than $2 a month, he must, in time, believe that you are furnishing a real service and that you are entitled to his respect and confidence.

### Average Citizen Still Suspicious

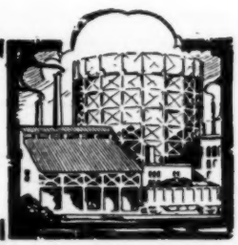
In spite of what we have accomplished, the average citizen, today, still believes that there is something mysterious and unusual about the conduct of a public utility. He still believes that enormous profits are being made by these utilities. While he knows that the governmental bodies have made a colossal failure of practically every line of business endeavor in which they have entered and while he knows that the government could not run his business as economically or as successfully as he can himself, he still has a lurking idea that running a public utility is different and that possibly the city or the state or the national government could be successful in that particular business. He still believes that the water powers of the nation are being "grabbed by private interests" and used to exploit the people. He still fails to realize that every kilowatt of electric energy generated from these water powers is sold at a price fixed by his own regulatory body and that tremendous sums are paid in taxes each year as compensation to him for their use. These are some of the problems with which the average public utility is confronted and which can only be solved by taking the public fully into our confidence and by using every medium available to place the true facts before them.

### Conclusion

In closing, just a word of warning. Any utility whose house is not in order and which cannot give this full measure of information to the people had better pursue the old policy of saying nothing. Every public utterance by a representative of a utility and every printed line used by it must be the exact and literal truth. Let our opponents spread the falsehood and while it is going to be a hard, discouraging battle, I, personally, am fully convinced that in the long run, "truth must prevail."



# NEWS OF THE GAS INDUSTRY



## Gas Men to Discuss Means of Saving Coal and Oil

Problems affecting the future fuel supply of the country will be brought up for solution at the Seventh Annual Convention of the American Gas Association, which is to be held during the first five days of the week beginning October 12 at Atlantic City.

The call to attend the convention, issued by H. C. Abell, president of the association, was sent to nearly a thousand gas companies and manufacturers of gas appliances and equipment, and arrangements are being completed to seat more than 5,000 delegates, committeemen and others interested in the conservation and application of heating fuels.

Recent developments in the oil and coal industries are responsible for much of the interest in the deliberations of the country's gas men this year. It is recognized that a situation has developed which will probably mark a turning point in the history of fuel. The question to be decided is whether or not the manufactured gas industry is in a position to substitute its product on a national scale for what is generally admitted to be the present wasteful methods of employing fast disappearing natural deposits.

**Prominent Gas Men to Discuss Subject**

Among those who will discuss this subject are Henry L. Doherty of New York, R. M. Searle, president of the Rochester Gas & Electric Corporation of New York, Horace C. Porter of Philadelphia, Henry O. Loebell, vice-president of the Combustion Utilities Corporation, William P. Ryan and Robert T. Haslam of the Massachusetts Institute of Technology, Jerome J. Morgan of Columbia University, Floyd Parsons of New York, Arno C. Fieldner of the U. S. Bureau of Mines, and S. W. Parr of the University of Illinois. These are all among the foremost authorities on fuel application in the country.

While technical problems are naturally the most pressing, there will also be a general conference to deal with the question of public relations. The gas industry, in collaboration with the electric, telephone and street railway interests, is organized for this work on a national scale and has committees on public utility information in 36 states. This is said to be the first time that these committees have ever met together as a whole.

**National Advertising Campaign**

A gathering of industrial gas engineers of the country will be held to report on the results of the national advertising campaign which the gas association is conducting among industrial fuel users. It is recognized that with present high labor costs and constantly rising prices for nearly all materials, manufacturers of all classes are demanding more economical as well as more efficient methods of heating.

Gas engineers believe that manufactured gas is the logical means to this end and point to the fact that the use of gas in industry has increased more than 1,000 per cent in the past ten years, as compared with an increase of 100 per cent in total gas produced. The next step, it is said, should be the development of the most efficient industrial appliances possible, with special reference to particular uses like non-ferrous metal melting, brick firing, vitous enameling, glass hardening, varnish making and food drying. The establishment of a national research organization for this purpose will be discussed.

An exhibit of gas appliances on the Steel Pier will be, as in former years, an outstanding feature of the convention. There will be 195 exhibitors as compared with 182 in 1924. This is nearly twice as many as there were four years ago and is considered an indication of the growth of the manufactured gas industry within recent years.

**Fitchburg Gas Co. to Construct New Building**

Fitchburg, Mass. — The Fitchburg Gas & Electric Light Company has filed a request for a building permit at the office of Joseph D. O'Keefe, building superintendent, for the new general office building at Main and Grove streets, to cost about $100,000. The permit will be granted following the filing of plans with the building department.

---

**Pennsylvania Gas Co. Plans Expansion**

Erie, Pa.—Permits have been issued for the construction of three additional buildings to be a part of the Pennsylvania Gas Company's system in giving the city of Erie a blend of artificial and natural gas.

One permit is for a $20,000 boiler house. A storage building will cost $3,500, and a smaller storage building will cost $700.

---

**High Pressure Gas System Successful**

Bloomington, Ill.—For three weeks the Union Gas and Electric Company has been pumping gas to Bloomington's northwest side and all of Normal under higher pressure than formerly. During that period its officials have received less complaints of low pressure or unusually high pressure than ever before.

The system was put into operation on August 10 following considerable expense and much time put in by a corps of men in installing special apparatus and connecting up Normal with its high pressure main.

---

**Central Illinois Service Spends $200,000 to Improve Gas Plant**

Quincy, Ill—More than $200,000 has been spent by the Central Illinois Public Service Company in the last six months here, to modernize and improve the company's gas plant so that perfect service might be continued. An additional $50,000 worth of improvements is now in process, to be completed within sixty days.

# Paterson Gas Light Co. Chartered 100 Years Ago

Passaic, N. J.—One hundred years ago, September 2, 1825, the Paterson Gas Light Company was chartered by the Legislature of New Jersey. Previous to this the first manufacture of gas in this country had been begun in Baltimore in 1816 and in New York City in 1823. Paterson in 1825 having fewer than 2,000 inhabitants, but progressing rapidly under the stimulus given it by Alexander Hamilton and his Society for Establishing Useful Manufactures, entered the gas field in spirit if not in deed, for it was not until 1847 that actual manufacture of gas was started by the Paterson Company.

Still New Jersey and Paterson in particular was a pioneer in the gas industry. Paterson and Newark together share the honor of establishing the first gas manufacturing plant in New Jersey. While records fail to determine which city started first, it is known that one of the two cities was the thirteenth in the United States to introduce the use of gas for lighting purposes. In this country the record of cities in the first use of gas follows:

Baltimore, 1816; New York, 1823; Brooklyn, 1825; Boston, 1828; Louisville, 1832; New Orleans, 1834; Philadelphia, 1836; Pittsburgh, 1836; Cincinnati, 1840; Manchester, N. H., 1841; St. Louis, 1846; Fall River, Paterson and Newark, 1847.

The Paterson Gas Light Company was chartered with a capital stock of $75,000 divided into 15,000 shares with a par value of $5 each. The promoters were John Colt, John Kear and Andrew Parsons.

The success of the Paterson Gas Light Company, which began to operate in 1847, led to the organization in 1864 of the Passaic Gas Light Company. Ten years later, Peoples Gas Light Company of the City of Paterson was incorporated. It built works and divided the Paterson field with the Paterson Gas Light Company. The Passaic Gas Light Company had no competition until the appearance of the Passaic Electric Light Company, in 1885. From that time until 1895 when they were merged in the Passaic Lighting Company, these two were rivals.

In 1899, the gas and electric light companies of Paterson, Passaic and vicinity were merged under the name of Paterson and Passaic Gas and Electric Company, which was leased to Public Service Corporation of New Jersey in June of 1903.

In 1909, when Public Service Gas Company was incorporated, the consumption of gas in the Paterson district was 652,784,466 cubic feet, while in 1924 the consumption was 1,350,695,512 cubic feet.

### Big Merger Reported

Denver, Colo. — According to press reports, the Central & Southwest Utilities Company, controlled through ownership of all its common stock by the Middlewest Utilities Company, has been organized, and in turn owns practically all the common stock of the American Public Service Company, the Public Service Company of Omaha, the Chickasha Gas and Electric Company, the Central Power and Light Company and the Southwestern Securities Company, which controls the Southwestern Gas and Electric Company.

The five subsidiaries named are major concerns serving a territory which includes 209 cities and towns in Kansas, Oklahoma, Texas, Arkansas, Louisiana and Mississippi.

# National Conference on Information Committee Work

The following is a detailed program of the National Conference on Information Committee Work to be delivered at the convention in Atlantic City:

### President's Luncheon

Tuesday, October 13, 1 o'clock, Belvedere Room, Hotel Traymore. (Luncheon and roundtable discussion to take up entire afternoon.)

Chairman—H. C. Abell, president American Gas Association.

Topic—"The Future of Information Committee Work."

General discussion.

Invited guests to include, among others: S. Z. Mitchell, Electric Bond & Share Company; W. S. Gifford, American Telephone and Telegraph Co.; J. J. O'Brien, H. M. Byllesby and Company; T. N. McCarter, Public Service Electric & Gas Company; A. P. Lathrop, American Light and Traction Company; W. E. Creed, Pacific Gas and Electric Company; H. L. Doherty, H. L. Doherty and Company; H. G. Bradlee, Stone and Webster, Inc.; B. C. Cobb, Hodenpyl, Hardy and Company; A. E. Childs, Massachusetts Lighting Company; M. J. Insull, Middle West Utilities Company; G. B. Cortelyou, Consolidated Gas Company; D. D. Barnum, Boston Consolidated Gas Company; R. B. Brown, Milwaukee Gas Light Company; C. A. Munroe, Laclede Gas Light Company; J. E. Davidson, National Electric Light Association; M. H. Aylesworth, National Electric Light Association; George F. Oxley, National Electric Light Association; J. N. Shannahan, American Electric Railway Assn.; L. S. Storrs, Am. Elec. Ry. Association; Labert St. Clair, American Electric Railway Association; all chairmen of Public Utility Information Committees; all directors of Public Utility Information Committees.

### First General Conference

Wednesday afternoon, October 14, 2 o'clock, Belvedere Room, Hotel Traymore.

Opening Remarks and Roll Call (15 min.)—F. L. Blanchard, chairman Publicity and Advertising Section.

Address (15 min.)—"The Purpose of This National Conference," H. C. Abell, president American Gas Association.

Address (15 min.)—"What an Information Committee Is and What It Is Not—What It Can and Cannot Do for the Public Utility Industry," B. J. Mullaney, vice-president Peoples Gas Light & Coke Co., Chicago.

Development of Subject (5 min.

each)—"Factors That Make for Successful Committee Work," S. T. MacQuarrie, director of the New England Committee. "Teamwork in the Industry," George McQuaid, director of the Texas Committee.

Discussion (10 min.).

Address (15 min.)—"The Newspaper Contact. How Is It Accomplished? What Is Its Value?" Joe Carmichael, director of the Iowa Committee.

Development of Subject (5 min. each) — "Getting the Editor's Friendship," W. P. Strandborg, director of the Oregon Committee. "Developing Utility News Possibilities," S. E. Boney, director of the North and South Carolina Committee.

Discussion (10 min.)

Address (15 min.)—"In Eighteen Months 2,514 Talks on the Public Utility Business Have Been Made in Illinois to 440,000 Persons. How It Is Done," H. M. Lytle, vice-president Chicago Rapid Transit Company.

Development of Subject (5 min. each)—"Fundamental Work Done in the Educational Area," J. B. Sheridan, director of the Missouri Committee. "Educational Work of the State Committees," H. M. Blain, director of the Louisiana-Mississippi Committee. "Public Speaking Work in Oklahoma," E. F. McKay, director of the Oklahoma Committee.

Discussion (10 min.).

Adjournment.

**Second General Conference**

Thursday afternoon, October 15, 2 o'clock, Belvedere Room, Hotel Traymore.

Opening Remarks and Roll Call (10 min.)—F. L. Blanchard, chairman Publicity and Advertising Section.

Report of Nominating Committee and Election of Officers (5 min.)—A. C. Watt, chairman, Hodenpyl, Hardy and Company, New York, N. Y.

Address (15 min.)—"The Story the Public Ought to Know," C. A. Munroe, chairman of the board Laclede Gas Light Co., St. Louis.

Development of Subject (5 min. each)—"The Public's Interest in Information Committee Work," F. W. Crone, director of the New York Committee. "Michigan's Second Open House Week," Alfred Fischer, director of the Michigan Committee.

Discussion (10 min.).

Address (15 min.)—"By-Products of the Committee Movement," P. H. Gadsden, vice-president United Gas Improvement Co., Philadelphia, Pa.

Development of Subject (5 min. each)—"Contact With Commercial Organizations," John Mellett, director of the Indiana Committee. "Getting the Other Fellow's Viewpoint," H. M. Davis, director of the Nebraska Committee.

Discussion (10 min.).

Address (15 min.)—"The State Committee Cannot Do It All," E. W. Hodges, director of the Arkansas Committee.

Development of Subject (5 min. each)—"The Future of the Information Committee Movement," G. E. Lewis, director of the Rocky Mountain Committee. "Developing a National Understanding and Viewpoint," A. F. Herwig, director of the Wisconsin Committee.

Discussion (10 min.).

—Adjournment.

**Georgetown Gas Light Issues $250,000 Bonds**

Washington, D. C.—The Georgetown Gas Light Company has been authorized to issue $250,000 worth of fifty-year 5 per cent gold bonds by the Public Utilities Commission. The issue comprises the remaining part of a $1,000,000 bond issue authorized twelve years ago.

Funds derived from the bond issue will be used for extensions and improvements to gas service west of Rock Creek.

**Gity Council Approves Gas Rate**

The City Council of Fort Collins, Colorado has notified the Poudre Valley Gas Company that its rates of 40 cents per 1,000 cubic feet commodity charge, $9 a year customer charge and an annual reservation charge of 32 cents per cubic foot of maximum hourly demand, for natural gas is satisfactory, the rates to begin as soon as the service starts.

**Contest for Front Porch Dressing Ended**

The judges of the contest for dressing the front porches of the Steel Pier at the forthcoming Atlantic City Convention of the American Gas Association have awarded the privilege of exhibiting to the Columbus Heating & Ventilating Company, Columbus, Ohio, and the A. H. Wolff Gas Radiator Company of New York. These two successful contestants have been asked to prepare their exhibits according to plans submitted and to have such exhibits in place ready for public inspection by 8 o'clock Monday morning, October 12.

Three exhibitors of central gas house-heating equipment entered the contest. The Bryant Heater & Manufacturing Company of Cleveland, Ohio, was the third contestant. The judges had a most difficult task deciding which were the best plans, as all of them were very attractive and contained suggestions of great appeal to the public. As originally intended, the association was expected to dress one porch to represent the old-fashioned coal stove basement and the other porch was to be awarded to the successful contestant. After examining the excellent plans submitted, the judges thought it best to devote both porches to gas heating installations and accordingly privileges of exhibiting were awarded to the companies mentioned above.

**West Hamilton County Gas Co. Organized**

A company called the West Hamilton County Gas Co. has been organized in Cincinnati to lay mains and furnish artificial gas from a large coke plant to be built at Trautman's Station on the Ohio River. The plan is to supply Cleves, North Bend, Addyston, Delhi, Fernbank and Sayler Park.

L. B. Paterson is president and Stanley Shaffer, formerly of Hamilton, is attorney for the company.

# Calumet Gas Co. Inaugurates Annuity Plan

Inauguration of a Service Annuity Plan in the Calumet Gas and Electric Company through which employees will be retired with pensions as a reward for service, was announced today.

The pension system becomes effective September 15.

Men employees who attain the age of 65 years while in the service of the company, and women employees who attain the age of 60 years while in service will be eligible for retirement with a pension.

The annuity for each employee retired will be an amount equal to two per cent of the average annual salary for the period of his or her continuous service to the date of retirement, multiplied by the number of years of service, not to exceed an amount equal to 50 per cent of the employee's rate of pay during the last year of service. The maximum pension for retired employees will be $3,000 a year.

Employees of the company will not be required to make any payments into the annuity fund as the company will maintain the fund and the payment of pensions as a reward for faithful service.

The adoption of the plan by the Calumet Gas and Electric Company is another important step taken in the interests of employees since Samuel Insull and associates assumed the management of the company.

Recently an employees' representation plan was established through which employees have a voice in the management on all questions involving their relations with the company, including wages, hours of labor and working conditions.

At the past two Christmas seasons, all employees of the company who had been on the payroll six months, or longer, received paid-up life insurance policies ranging from $500 to $1,500, depending on the length of their period of service.

### Assurance of Steady Income

The adoption of the Service Annuity Plan means that all employees who grow old in the service of the company will be assured of a steady income for the remainder of their lives after their retirement from active service.

Men employees over 65 years of age and women employees over 60 years of age at the time of the adoption of the plan will have their annuity computed upon the number of years of service up to this date and, therefore, will have the same standing as employees who shall attain those ages while in service after the plan becomes effective.

Men employees who attain the age of 60 years, and women employees who attain the age of 55 years while in service, may be retired on an annuity upon request, provided they have been in the service of the company continuously for twenty years or more. The percentage of the final rate of pay for maximum annuity for those who retire voluntarily will range from 40 to 48 per cent, instead of 50 per cent.

A board of trustees will be selected, composed of three officers and two employees of the company, for the purpose of administering the Service Annuity Plan and maintaining a Service Annuity Fund, from which the pensions will be paid.

---

### W. Egner Resigns as Supt.

Albion.—William Egner has resigned his position with the Western New York Utilities Company, as superintendent of the Albion Gas Company and will move to Suffin, where he has accepted a position as superintendent of the gas company. Mr. Egnor has resided here several years.

### General Gas and Electric Co. Absorbs Winston-Salem Gas Co.

Winston-Salem, N. C.—The announcement just made by the General Gas and Electric Corporation that that company had purchased the property of the Winston-Salem Gas Company of this city, thus taking the local company into a group of gas companies operated by W. S. Barstow and Company of New York, and whereby arrangements have been made whereby the company will operate under the direction of the North Carolina Public Service Company, with headquarters in Greensboro, that company being a subsidiary of the General Gas and Electric Company, carries with it the announcement of improvements in the service of the local company to approximate $100,000.

By acquiring the gas property in this city the General Gas and Electric Corporation adds the largest city in North Carolina to its public utility operations, and the plans of the new management calls for the giving of such service in this city that cannot be equalled by any other city in North Carolina. The company also controls the service at High Point, Greensboro, Burlington and Salisbury-Spencer, which plants are operated by the North Carolina Public Service Company.

Other gas properties owned and operated by the General Gas and Electric Company, through its subsidiaries, includes Columbia and Spartanburg, in South Carolina and Orlando, Florida. Electric service in these cities and other smaller cities throughout this section is also operated by the subsidiary

---

### Contracts Awarded

The General Engineering & Management Corporation of New York, which lately took over the operation of Kennett Gas Company, has placed order with the U. G. I. Contracting Company, Philadelphia, for the installation of the Chrisman Cycle on their carburetted water gas apparatus at Avondale, Pa., plant.

It is expected that the results and efficiencies on the apparatus will be greatly improved after the installation of the Chrisman Cycle.

The Binghamton Gas Works of Binghamton, N. Y., have placed order with the Gas Machinery Company of Cleveland, Ohio, for ten-inch and eight-inch hydraulically operated exhaust steam valves and auxiliary equipment so that the eleven-foot and nine-foot water gas sets can be operated on exhaust steam.

The installation will also include exhaust steam accumulator and auxiliary equipment to maintain a practically constant rate of flow of steam to the generators.